

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number  
**WO 2005/068619 A1**

(51) International Patent Classification<sup>7</sup>: C12N 9/52,  
15/62, 15/57, C07K 16/46, C12N 15/63, 1/21, C12P 21/02

(21) International Application Number:  
PCT/EP2005/000444

(22) International Filing Date: 13 January 2005 (13.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
P200400073 14 January 2004 (14.01.2004) ES

(71) Applicant (for all designated States except US): CON-  
SEJO SUPERIOR DE INVESTIGACIONES CIENTÍ-  
FICAS [ES/ES]; Serrano, 117, E-28006 Madrid (ES).

(72) Inventors; and

(75) Inventors/Applicants (for US only): VEIGA CHACÓN,  
Esteban [ES/ES]; Serrano, 117, E-28006 Madrid (ES).  
DE LORENZO PRIETO, Víctor [ES/ES]; Serrano, 117,  
E-28006 Madrid (ES). FERNÁNDEZ HERRERO, Luis  
Angel [ES/ES]; Serrano, 117, E-28006 Madrid (ES).

(74) Agent: ARIAS SANZ, Juan; ABG Patentes, S.L., Orense,  
68, 7th floor, E-28020 Madrid (ES).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: GENERATION OF SPECIFIC ADHESION IN GRAM-NEGATIVE BACTERIA BY MEANS OF ANCHORING IM-  
MUNOGLOBULIN SINGLE DOMAINS ON THEIR SURFACE WITH AUTOTRANSPORTERS

(57) Abstract: The present invention refers to an expression vector for gram-negative bacteria allowing for the production of hybrid  
proteins between single domain recombinant antibodies and a transporter domain of an autotransporter, as well as to its anchoring  
and expression on the external surface of a bacterial membrane, and to a method of specific bacterial adhesion to a surface containing  
a specific antigen.

WO 2005/068619 A1